

ABSTRACT

1           A modular backplane having a low-profile bridge module for industrial  
2 computers is disclosed. The modular backplane generally comprises a plurality of modular  
3 backplane segments and a plurality of bridge modules for connecting the modular backplane  
4 segments. Each modular backplane segment includes a front side and a back side, in which  
5 the front side has a plurality of slots and the back side has a primary dedicated connector and  
6 a secondary dedicated connector. Each bridge module includes a circuit board, a bridging  
7 integrated circuit, and a pair of connectors. One of the bridge connectors is engaged with the  
8 primary dedicated connector in one of the backplane segments and the other connector is  
9 engaged with the secondary dedicated connector in its neighboring segments, and vice versa,  
10 such that all the modular backplane segments are communicatively connected with another.  
11 The modular bridge is of a low-profile, and the dedicated connectors are provided in an area  
12 where no slot is formed.